TECHNICAL NOTES

LAKE STATES FOREST EXPERIMENT STATION
U.S. DEPARTMENT OF AGRICULTURE · · · FOREST SERVICE
UNIVERSITY FARM ST. PAUL 1, MINNESOTA
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Fair 1953 Forest Tree Seed Crop in the Lake States

Forest trees in the Lake States produced seed crops in 1953 about equal in the aggregate to those of 1952 and 1951 but poorer than those of 1950, according to observations made at field branches of the Lake States Forest Experiment Station. The native pines and spruces most used in reforestation, generally had medium crops. Except for hemlock, with a bumper crop, most other conifers had fair seed crops. Seed crops of the hardwood species averaged about as follows: maples, birches, and bigtooth aspen, good; beech and basswood, poor; ashes and oaks, failing to poor; and quaking aspen, variable (see table on back of sheet).

In northern Minnesota no species had consistently good seed crops, although eastern white pine, black spruce, and northern white-cedar had good crops in some localities. White spruce, balsam fir, tamarack, quaking aspen, American elm, and the oaks mostly had crop failures. Jack pine and yellow birch had medium crops, and red pine varied from failure to medium in seed production.

In northern Wisconsin hemlock had a bumper crop. Good seed crops were reported for white pine, Scotch pine, balsam fir, white-cedar, the maples, the birches, and the aspens. Jack pine and spruces had fair seed crops. Red pine and basswood produced poor seed crops. The ashes, northern red oak, and tamarack had crop failures.

In central Upper Michigan hemlock produced a bumper seed crop. Yellow birch and the maples had good crops. Fair crops were produced by white pine, the spruces, and American elm. White-cedar, beech, and black ash produced poor seed crops, and balsam fir had a crop failure.

In the Lower Peninsula of Michigan the only species to produce good seed crops were sugar maple and black maple. Medium crops were reported for the pines, white spruce (in the north half, failure in the south half), and beech. American elm and red maple produced poor seed crops, and the oaks, failing to poor crops.

For seed collectors, usually interested mostly in pines and spruces, 1953 was a fair year - generally a little better than 1952. However, the prospects for establishing natural reproduction are no better than fair on the average. The general failure of the acorn crop is of considerable concern to wildlife managers because a number of animal species depend heavily on such mast for their winter food.

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(over)

Table 1.--Forest tree seed crop in the Lake States, 1953

Species	Estimated percentage of a full crop 1/ in --			
	Northern Minnesota	Northern Wisconsin	Central Upper Mich.	Lower Peninsula Michigan
Red pine	7-50	25	--	50
Eastern white pine	7-75	75	50	50
Jack pine	50	50	--	--
Scotch pine	--	75	--	--
White spruce	7-25	50	50	3/7-4/50
Black spruce	50-75	50	50	--
Norway spruce	--	50	--	--
Balsam fir	7-25	75	7	--
Eastern hemlock	--	95	95	--
Northern white-cedar	25-75	75	25	--
Tamarack	7	7	--	--
Sugar maple	--	75	75	75*
Red maple	--	75	75	25
American beech	--	--	25	50
Basswood	--	25	--	--
Yellow birch	50	75	75	--
Paper birch	--	75	--	--
Quaking aspen	7	75	--	--
Bigtooth aspen	--	75	--	--
American elm	7	--	50	25
White ash	--	7	--	--
Black ash	--	7	25	--
Bur oak	7	--	--	--
Northern pin oak	7	--	--	25
Black oak	--	--	--	25
Northern red oak	7	7	--	7
Shagbark hickory	--	--	--	25
White oak	--	--	--	4/7-3/25

* Black maple - same report.

1/ Percentages of full crop are classified as follows:
0-15, failure;
16-35, poor;
36-60, medium;
61-90, good; and
91-100, bumper.

2/ (-) signifies no report on this species.

3/ South half of Lower Peninsula.

4/ North half of Lower Peninsula.